

## Keynote-2

### Manufacturing Machine Automation and Precision Capability

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#### **Abstract:**

This paper will review some of the automation methodologies behind historic and recent achievements in ultra-precision manufacture. These include thermal, static and dynamic positional control, in-process and post-process corrective metrology. These are based on both sensor technology and algorithmic developments.

#### **Biographical sketch of the speaker**

Paul Morantz is a Principal Research Fellow in the Precision Engineering Institute at Cranfield University. Investigator or main researcher on in excess of £20 million funded research over the last decade; Paul has been an internationally recognised precision engineer in the fields of motion control, metrology and machine tool development since the 1980s. Notably he was responsible for the machining and supporting metrology of (among others) the ultra-precision freeform surfaces that secured the most accurate temperature measurements ever performed and the new proposed fixed value of the Boltzmann constant.